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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,386	12/07/2001	Marek M. Furyk	FURYK 1-6-2-2	2855

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EXAMINER
TRA, TUYEN Q

ART UNIT	PAPER NUMBER
2873	

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/008,386	FURYK ET AL.	
	Examiner	Art Unit	
	Tuyen Q Tra	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,6-8,10,13-15 and 17* is/are rejected.

7)☒ Claim(s) *2,4,5,9,11,12,16 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Oath/Declaration

1. The declaration filed 12/07/01 is acceptable.

Drawings

2. The drawings in this application are objected to by the Draftsperson as for the reasons noted on the attached Notice of Draftsperson's Patent Drawing Review, form PTO-948.

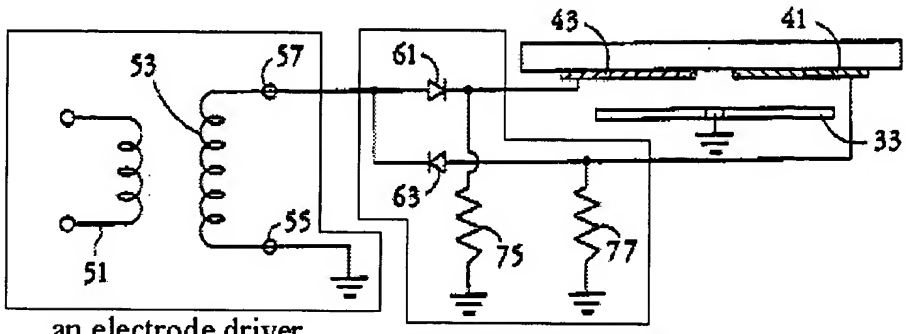
Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Neukermans et al. (U.S. Pat. 5,629,790 A).

With respect to claim 1, Neukermans et al. discloses micromachined torsion scanner and method thereof in Figure 4 comprising of an electrode driver; and a switching network, coupled to an output of the electrode driver that: in a first configuration, couples the output to a first electrode (43) of an axis of the MEMS device and grounds an opposing second electrode of the axis of the MEMS device, and in a second configuration, couples the output to the second electrode (41) and grounds the first electrode (see Figure 4 below).



b) With respect to claims 3 and 10, Neukermans et al. further discloses wherein the first and second configurations are mutually exclusive.

c) With respect to claims 7 and 14, Neukermans et al. further discloses wherein the electrode driver and the switching network are embodied in an integrated circuit.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 6 and 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neukermans et al. (U.S. Pat. 5,629,790 A).

Neukermans et al. discloses micromachined torsion scanner and method thereof in Figure 4 comprising of an electrode driver; and a switching network, coupled to an output of the electrode driver that: in a first configuration, couples the output to a first electrode (43) of an axis of the MEMS device and grounds an opposing second electrode of the axis of the MEMS device,

and in a second configuration, couples the output to the second electrode (41) and grounds the first electrode.

However, Neukermans et al. fails to teach a second electrode driver; and a second switching network, coupled to an output of the second electrode driver that: in a first configuration, couples the output to a third electrode of a second axis of the MEMS device and grounds an opposing fourth electrode of the second axis of the NEMS device, and in a second configuration, couples the output to the fourth electrode and grounds the third electrode.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make a plurality of third and fourth electrode, electrode drivers and switching networks, coupled to an output of the electrode drivers, since it has been held that mere duplication of the essential working parts of a device involves only routing skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

7. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neukermans et al. (U.S. Pat. 5,629,790 A).

Neukermans et al. discloses micromachined torsion scanner and method thereof in Figures 4, 12a and 12b comprising of a plurality of MEMS devices each having first and second axes of tilt; and

a corresponding plurality of drive circuits, each comprising:

first electrode driver, a first switching network, coupled to an output of the first electrode driver that alternatively drives opposing first and second electrodes (225) of a first axis of one of the plurality of MEMS devices.

However, Neukermans fails to teach a second electrode drive, a second switching network, coupled to an output of the second electrode driver that alternatively drives opposing third and fourth electrodes (223) of a second axis of the one of the plurality of MEMS devices (see Fig 4, 12a and 12b).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make a plurality of a second electrode drive, a second switching network, coupled to an output of the second electrode driver that alternatively drives opposing third and fourth electrodes (223) of a second axis of the one of the plurality of MEMS devices, since it has been held that mere duplication of the essential working parts of a device involves only routing skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Allowable Subject Matter

8. Claims 2, 4, 5, 9 11, 12, 16 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for the indication of allowable subject matter is that (claims 2 & 9) electrode driver comprises: a digital-to-analog converter; arid an amplifies that provides said output; (claims 4 & 11) switching network comprises: a first switch interposing the output and the first electrode; a second switch interposing the output and the second electrode; a third switch interposing the first electrode and an electrical ground; and a fourth switch interposing the second electrode and the electrical ground; (claims 16 &18) the first and second electrode drivers

each comprise: a digital-to-analog converter; and an amplifier that provides the output disclosed in the claims is not found in the prior art.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Murata (US Patent 5,847,859 A) discloses optical reading device in Fig. 8 comprising of electrode controller (108), a switching device (D1, D1) and electrodes (P1, P2).

b) Heimbuch (US Patent 5,719,695 A) discloses SLM in Figure 2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (703) 306-5712. The examiner can normally be reached on Monday to Thursday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps, can be reached on (703) 308-4883. The fax number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

tt

July 3, 2003

Hung Xuan Dang
Primary Examiner